

Claims Rejections under 35 U.S.C. 102

Claims 1-11 and 17 stand rejected under 35 U.S.C. 102, the Examiner contending that Schulman, (US Patent no. 4,071,032) "discloses an elongated hollow tube formed of ferrite ..." citing several recitations in Schulman. On close inspection however, there is no recitation whatsoever, nor suggestion for that matter, in Schulman of a hollow ferrite tube and about which is wound an electrically conductive wire. Of critical significance is the fact that a word search does not identify any of the descriptors: elongated, hollow or tube; that the examiner says is described. Moreover, neither does a word search identify synonyms of the above descriptors, such as cylinder, pipe, conduit or sleeve and the like. Still further there is nothing disclosed in Schulman that can even be remotely considered or confused with an elongated hollow tube. Accordingly, since there is absolutely no recitation of a hollow ferrite tube in Schulman, neither can there be the existence of an "interior region" of the hollow ferrite tube adapted for housing microstimulator electronics. Furthermore, Schulman neither teaches nor suggests a sleeve encasing the hollow tube. In consideration of the foregoing, it is respectfully requested that the above rejection be withdrawn.

Independent claim 17 recites in part "an elongated hollow tube formed of a magnetic field concentrating material..." consistent with the language of claim 1 previously discussed. Accordingly, the arguments advanced above for the failure of Schulman to teach or suggest a hollow tube formed of a magnetic field concentrating material are equally applicable for claim 17. Furthermore, in view of the fact that Schulman does not disclose nor teach an elongated hollow tube, the Examiner's

citation of the element 74 in Schulman is inappropriate, since there is no discussion of any sleeve or otherwise encasing an elongated hollow tube.

With regard to claim 8, the Examiner contends that Schulman '032 discloses a silicone matrix to fill voids of the hollow tube, citing for support Figure 1, element 25, column 3, lines 58-68 of Schulman. The Examiner completely misstates Schulman. Element 25 in Figure 1 is disclosed in terms other than a silicone matrix. There is no mention whatsoever of a silicone matrix in Schulman. Moreover, element 25 encapsulates a pacemaker 10 with what appears to include a charging coil 21 that feeds a charging circuit 20. The potting mix of Applicant is used to fill void spaces between the microstimulator electronics and the interior of the elongated hollow tube, subsequent to placement of the electronics in the tube, which is neither disclosed nor suggested by Schulman. Further the Examiner relies on column 12, lines 39-41 which relates to Figure 8. According to Schulman, container 74 encloses among other things coil 37 and slabs 58 and 59. Applicant uses a potting mix to fill any voids within the elongated hollow tube and does not encase the conductive wire coil, wound around the other surface of the hollow tube, with the potting mix. As is best understood from the Office Action, the Examiner is impermissibly redefining the container 74 of Schulman to be the elongated hollow tube of Applicant. This is inappropriate, since the wire coil of Applicant is wound around or surrounds the hollow tube, which is distinctly different from Schulman, where the container 74 surrounds the coil 37.

Applicant utilizes silicone potting matrix in part because such matrix in its final state is solid, yet pliable. Advantageously, the pliable character of the matrix absorbs mechanical shock and thereby significantly reduces, if not eliminates completely, the

fracture potential of the delicate folded IC chips of the microstimulator electronics, when the housing receives a significant mechanical shock, such as for example, when the housing is dropped and impacts a hard surface. Schulman teaches oppositely and directly away from Applicant, in that the epoxy, which is disclosed as an encapsulation material, is in its final state, hard and rigid and therefore would transfer any impacted mechanical shock through the epoxy without absorption, directly to the delicate microstimulator electronics, significantly raising the potential of chip fracture or wire bond dislodging.

Furthermore and importantly, and contrary to epoxy and the like, the silicone potting matrix claimed by Applicant is superior in its water transmissivity through the matrix. Accordingly, the use of the silicone potting matrix and a getter significantly improves the removal of any water and moisture remaining in the void spaces of the interior region of the elongated hollow tube, subsequent to the placement therein of the microstimulator electronics. The use of epoxy and the like would potentially maintain residual moisture within the void spaces, thereby increasing the potential of causing shorting between wire bonds and wire connectors and other significant deleterious effects, such as corrosion.

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Claim 9 stands rejected under 35 U.S.C. 102 as being anticipated by Schulman '032 or in the alternative, claim 9 stands rejected as being considered as obvious over '032 in view of Schulman '284. The grounds of the Examiner's rejection are based in

part on the Examiner's contention that "...it seems that the epoxy filler matrix disclosed by '032 inherently includes the characteristics of a 'getter'...". Fundamentally, this is nothing more than mere speculation on the part of the Examiner. There is no basis to conclude or even speculate that epoxy disclosed and taught by Schulman '032 inherently includes a getter. No such language or suggestion exists in Schulman '032. Moreover, the Examiner relies on Schulman '284, contending that '284 teaches to modify the epoxy filler of '032 to include a getter. Applicant has previously emphasized the teaching away of Schulman '032 by the disadvantageous use of epoxy as contrasted to the superior and advantageous use of Applicant's silicone potting matrix.

With regard to the rejection of claims 12-14, 16, 18-21 and 23 under 35 U.S.C. 103(a), as is best understood, it is the Examiner's position that although the '032 patent does not explicitly disclose the specific and respective limitation in each of the identified claims, the '367 patent may be used by one of ordinary skill in the art to modify '032 so as to include the respective limitations. The above also applies to all other references cited in combination with the '032 patent. In as much as the Examiner's premise that the Schulman '032 patent discloses "an elongated hollow tube formed of ferrite", is both unfounded and unsupportable in that there is neither an express teaching nor suggestion in '032, as discussed earlier. Therefore, so are combinations of references with the '032 patent under 35 U.S.C. 103(a) to render the identified claims as unpatentable is also unfounded and unsupportable.

Moreover with regard to claims 16 and 23, the Examiner is engaging again in pure and multiple speculation. To contend that an ordinary skilled person would, based upon the '367 patent, first assign a dimension of 51 gauge to an unidentified wire size in

the '032 patent and subsequent to such assignment, then to change the 51 gauge dimension to a 44 gauge dimension, as claimed by Applicant is unsupportable speculation. The Examiner also considers 51 gauge to be about 44 gauge, which is untenable, since the two sizes differ by 226 percent.

For all of the above reasons and by virtue of the amendments to the claims, it is respectfully requested that the Examiner withdraw his rejections and pass the application on to allowance. In the event the Examiner has questions and wishes to resolve them by telephone, please therefore contact the undersigned at 661-702-6812.

Respectfully Submitted,

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Date

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